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Natural SHORT-HAND, Wherein

The nature of SPEECH and the manner of Pronunciation are briefly explained and a Natural REASON assigned from thence for the particular form of every Stroke. Every single Articulation whether Vowel or Consonant is marked by a distinct single Line.

All the simple Characters are as analogous to each other as the Sounds they represent; Also their Conveniency for Joining is commensurate to the Frequency of their use. The number of ascending and descending Lines are duly Proportioned to each other and the rules for writing and contracting are Few, plain and familiar.

To which is Annexed.

A Short-hand Character for expressing Musical or Inarticulate Sounds without the use of ruled Lines;

By Holdsworth and Aldridge of the Bank of England.

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BY PERMISSION:

TO THE

RIGHT HONORABLE

Sir THOMAS SEWELL,

MASTER OF THE ROLLS,

AND ONE OF HIS MAJESTY'S

MOST HONORABLE PRIVY COUNCIL;

THIS TREATISE OF

NATURAL SHORT-HAND

IS RESPECTFULLY INSCRIBED,

BY HIS HONOR'S

MOST OBEDIENT

HUMBLE SERVANTS,

WILLIAM HOLDSWORTH,

AND

WILLIAM ALDRIDGE.

THE

PREFACE.

MANY laudable attempts towards the perfecting the art of Short-hand have been made, by perſons of no ſmall genius, and yet the ſubject is very far from being exhauſted. Our day ſeems to have had the honor of bringing many other arts to maturity; and we ſee no reaſon to deſpair but that this alſo may arrive at an equal degree of perfection. How far the preſent attempt may be conducive to this end, is humbly ſubmitted to the judgment

of the candid and impartial part of the public, for whom it is designed.

We can only say, that our chief aim has been to preserve the greatest brevity, with the utmost plainness and simplicity; and that the system here offered is not the result of fancy or conjecture, but of a long series of observation and experiment.

The design of this publication is not to depreciate the real merit of other systems of Short-hand, but to discover what is still wanting, and, to the utmost of our power, to supply every real defect. Or in other words, to bring this useful art nearer to perfection --- to render its utility more extensive --- to make the learning it more easy ---- and the practice more pleasant and familiar. If we have succeeded, we claim no other merit than that of having paid great attention to the subject.

NATURAL

NATURAL SHORT-HAND is a title as ſingular and uncommon, as it is well ſuited to expreſs the difference between this Short-hand and all others. Every character, in this method, has its foundation in nature; and derives its particular form from the peculiar poſition of the organs of ſpeech, or the paſſage of the breath, in the act of pronunciation. Every ſimple ſound, whether vowel or conſonant, is denoted by a ſimple character. Every character will join to any preceding or ſucceeding one, with the greateſt facility; and is convenient in proportion to the frequency of its uſe in the Engliſh language.

All the characters which are uſed in this ſyſtem are contained in Plate V. and in order to underſtand and fix thoſe characters in the memory, little more than the knowledge of the alphabet itſelf is required. As to the obſervations

upon

upon thoſe plates, and the inſtructions in general, their deſign may be anſwered by once or twice reading them over.

The former part of this book, to Plate V. is moſtly of a ſpeculative nature: the deſign of which is to lead the learner into an acquaintance with the firſt principles of the art, by ſhewing him how thoſe principles are conformable to nature and reaſon; and may therefore be properly conſidered as an Introduction to what follows, which is altogether practical. And indeed by carefully reading over this firſt part, in which all the ſimple ſounds, and their correſponding characters, are preſented in ſo many different views, much of the art itſelf will be obtained, before the learning of it in form is once attempted; and whatever knowledge is thus obtained, will alſo have the advantage of not being eaſily forgotten.

That

That the learner may not be at a loſs how to write with exactneſs, or to read what is written with great readineſs, a large ſpecimen of the character is engraven. The two firſt plates of this ſpecimen contain ſeveral portions of ſcripture, that are to be met with in many other books of Short-hand. Theſe we have purpoſely choſen, that the learner may, if he pleaſes, for his own ſatisfaction, have the opportunity of making the compariſon. As alſo, that if any difficulty ſhould at firſt ariſe to the young practitioner, he may readily refer to the place in the Bible from whence it is taken.

Laſtly, to exerciſe the abilities of the learner, and at the ſame time to engage his attention, the remainder of the ſpecimen is inſerted; containing an original attempt to explain and demonſtrate the mechanical principles of natural philoſophy,

loſophy, in a manner entirely new, and heretofore unattempted. For this piece of philoſophy we are indebted to a learned and ingenious gentleman, who has alſo given ſome other aſſiſtance in this work.

Upon the whole, we attempt to give a rational and univerſal view of Short-hand writing, from its elements, through the ſeveral combinations of lines or characters. The reader, when he ſees the RATIONALE of our plan, and how it differs from all others, will be able to judge of its merit, and give the preference where he ſhall eſteem it to be due.

ERRATA.

Page 4, line 13, *for* progreſs, *read* proceſs.
Page 18, line 2, *for* pronouce, *read* pronounce.
Page 44, line 8, *inſtead of* four liquids, *read* five liquids.
Page 63, line 18, *for* properties, *read* proportions.

NATURAL SHORT-HAND.

IN all languages, however different from each other, mankind have only two ways of conveying their ideas with clearneſs and facility; theſe are by SPEECH and WRITING. By the former, we can with the greateſt eaſe and expedition communicate to the mind and underſtanding of others whatſoever paſſes within our own: and tho' by the latter, we cannot accompliſh this with ſo much readineſs; yet we make our ideas in ſome ſenſe viſible, preſerve them for futurity, and can review them occaſionally. In theſe

 reſpects

reſpects written diſcourſes are much preferable to oral ones, which having admiſſion to the memory by one of the ſenſes only, are nearly as tranſitory as the ſounds whereof they are compoſed. The principal advantage then which ſpeech has over writing, is the communicating our notions with greater ſpeed, and with leſs trouble. Now what we have chiefly in view, is to bring the art of writing as near to ſpeech in theſe reſpects, as the nature of things will permit.

It is well known that the complex form of letters in all languages, has been found a great hindrance to ſwift writing. To remove this inconvenience, ſeveral contractions of words in each language have been adopted: beſides which, ſeveral methods of ſhort-hand writing have been invented. It is ſuppoſed by ſeveral, that ſomething of this nature was practiſed in the early ages of the world: and that the Pſalmiſt alludes to thoſe whoſe practice it was to write with uncommon expedition, when he ſays, "My tongue is the "pen of a ready writer." Whether this conjecture be well founded or not, is of no mighty importance. Yet if age be any recommendation,

commendation, it is clear that the Hebrews did uſe many contractions, and eſpecially the Rabbinical and Cabbaliſtical writers. It was profeſſedly on this account that the learned JOHN BUXTORF wrote a book, intitled, "De "abbreviaturis hebraicis," as a key to theſe authors. We cannot from this infer the uſe of any character different from that which was commonly received; but that they uſed many contractions in words is very clear: and this practice they carried to great lengths. Sometimes a word was expreſſed, by joining together the initial and final letters only: at other times a whole ſentence, by joining together the initial letters of each word in the ſentence. It was from the laſt of theſe, that DR PRIDEAUX was inclined to believe the word MACCABEES had its origin, by putting together the initials of theſe words מי כמכה באלם יהוה "Who is like unto thee among the Gods, "O JEHOVAH?" This way of contracting words prevailed alſo among the Greeks; but, beſide this, they had the art of writing by ſhort marks or characters. It is reported by ſeveral, that XENOPHON, the hiſtorian and philoſopher, was the founder of this art

among them. But whoever was the inventor, or by whatſoever means they became poſſeſſed of it; this is evident from their own writings, that in proceſs of time they became famous in it; and of this the Lacedemonian ſcytal is a ſufficient proof.

The Romans finding the advantages neceſſarily reſulting from ſuch a compendious method of writing, ſoon came into an imitation of the Greeks. Towards the cloſe of AUGUSTUS's reign, thoſe who wrote ſhort-hand took the name of ACTUARII, becauſe they digeſted all the public acts. In progreſs of time their number increaſed, and their profeſſion became honourable and of greater extent. The account biſhop WILKINS gives of the art as practiſed among them, will point out ſomething of the nature of its conſtruction at that time. In his real and univerſal character, he ſays, "Eleven hundred arbitrary "marks for words were invented by the old "poet ENNIUS, to which TULLIUS TYRO, "CICERO's freedman, or as others ſay, CI-"CERO himſelf, added many to ſignify the "particles only." PHYLARGUS, the Samian, and MÆCENAS added yet more. After them,

ANNEUS

ANNEUS SENECA, by his own additions raiſed the number to five thouſand: but this not being enough, ſhort-hand writers in ſucceeding times increaſed the number to near three times as many. If this art had not then been found exceedingly uſeful, few or none would ever have been weak enough to attempt the learning of it. They were not acquainted with the method of writing by ſpelling of characters, and therefore were under an abſolute neceſſity of ſubſtituting an arbitrary mark for each word; a circumſtance which rendered its attainment no leſs difficult, than that of a new language.

The great deficiency which we have now hinted at, was in ſome meaſure ſupplied, when the method of writing by ſpelling of characters was firſt invented. For this diſcovery we are indebted to MR JOHN WILLIS, B. A. whoſe ſyſtem was firſt publiſhed about the year 1600, and paſt a great many editions in a ſhort time *.

Since

* His thirteenth edition of the ART of STENOGRAPHY, which we have now by us, was publiſhed in the year 1644, with an appendix, or as he calls it, a ſchoolmaſter, annexed, which he alſo publiſhed in the year 1647, a little before his death.

Since this improvement, various attempts have been made by ſeveral perſons to bring this uſeful art ſtill nearer to perfection; but their labours have not yet been attended with much ſucceſs. The fact is indiſputable, and the reaſon is plain: they have all along paid a great regard to the principles of their predeceſſors; while nature and reaſon, which alone ſhould have been carefully conſulted, have been almoſt totally neglected. Had the latter been purſued with as much care and diligence as the former, it is more than probable, the world would not have been troubled with ſo many different methods, nor the art itſelf been brought into ſo much diſrepute.

But there are two or three gentlemen, who cannot fairly be reckoned in this number. They have even gone ſo far as to reject all former principles that were not rational and demonſtrable; while yet, either through want of time, or through inattention, they have handled the ſubject too ſuperficially, and omitted ſeveral conſiderations of the utmoſt importance.

If we were to trace the hiſtory of SHORT-HAND WRITING, from the invention of the

firſt

firſt ſhort-hand alphabet down to the preſent time, it would appear, that the improvements herein made are not ſo conſiderable by far as they are commonly imagined. To evince the truth of this aſſertion, by examining ſeparately the merits of every performance, would here be of no uſe: what is ſufficient for our purpoſe on this head, has been already done by MR PHILIP GIBBS in his "Hiſtorical account of ſhort-hand;" carried forwards by MR JOHN ANGELL, in his "Introduction to ſtenography;" and brought down to the preſent time by an anonymous author, in a pamphlet intitled "The alphabet of reaſon." By the remarks theſe authors have ſucceſſively made; by a more cloſe examination of the ſeveral methods on which they have remarked; and by formerly learning and practiſing ſeveral of them, that were moſt approved; it appeared to us, that a ſhort-hand not founded upon fancy, but upon natural and rational principles, was much wanted.

We ſhall now ſhew what thoſe principles are, and attempt thereupon to compoſe a method of ſhort-hand writing capable of anſwering the end of its conſtruction. The ſubject itſelf

itſelf is worthy our curioſity, and being no leſs advantageous than pleaſant, we apply ourſelves thereto with readineſs and alacrity.

SHORT-HAND, or that which alone deſerves the name, is the art of writing by ſubſtituting certain marks or characters as the ſymbols of ſpeech: wherein, every SIMPLE SOUND ſhould be expreſſed by a SIMPLE CHARACTER. The PARTICULAR FORM of every ſimple character ſhould correſpond with the NATURAL POSITION of the organs of ſpeech, or the paſſage of the breath, in the act of pronunciation. The DISTINCTION between every ſimple ſound ſhould be marked by preſerving a like DIFFERENCE among the characters. The CONVENIENCY of every ſimple character ſhould be COMMENSURATE to the frequency of its uſe; and every character ſhould be ſuch as will JOIN with the greateſt eaſe and readineſs to any one preceding or ſucceeding, as may be required.

A very little reflection will ſoon convince us, that every part of the above deſcription is abſolutely neceſſary in the compoſition of a ſhort-hand alphabet. Leave out but one of theſe properties, and it will be proportionably defective

defective in that clearneſs and brevity which the art requires. On the other hand, an alphabet thus conſtructed will have the following advantages, ---- the characters being all uncompounded may be eaſily expreſſed --- deriving the particularity of their form from the poſitions of the organs of ſpeech, or the paſſage of the breath in the act of pronunciation, they may be eaſily attained, and kept in memory. ---- Being more or leſs convenient, according to the frequency of their occurrence, they may be written with the greateſt expedition; --- and being as different from each other as the ſounds they repreſent, may be read again at any diſtance of time with the utmoſt facility.

An alphabet thus formed will have the leſs occaſion for contractions; yet ſome will be indiſpenſibly neceſſary for the ſake of eaſe, diſtinctneſs and expedition: but even here fancy muſt not be indulged: the contractions muſt be immediately deducible from the alphabet itſelf: their application muſt be natural and eaſy, ſo as to be acquired without much difficulty, and retained without burdening the memory.

Now in order to diſcover any analogy between lines and ſounds in the ſeveral reſpects before mentioned, it will be neceſſary in the firſt place to enquire; how many ſimple ſounds there really are in the Engliſh language. The next enquiry will be, how many ſorts of ſingle lines, or ſimple characters can be obtained. And then, how theſe two, the ſingle lines and ſimple ſounds, may be moſt naturally and conveniently adapted to each other. When we have purſued theſe enquiries as far as is neceſſary, we ſhall then go on to conſider the double and treble conſonants, the prepoſitions and terminations of long words, together with ſuch of the particles as have their occurrence in ſpeech the moſt frequent.

The firſt enquiry is, how many ſimple ſounds are made uſe of in the Engliſh language.

As our main deſign is to adapt this method of ſhort-hand writing to our mother tongue, an enquiry thus limited might be ſufficient to anſwer the purpoſe; but it will not be altogether uſeleſs if we ſhould carry our thoughts a little farther; for this method

thod is capable not only of being adapted to the Engliſh language, but perhaps to any other whatſoever, eſpecially the learned languages.

In all articulate ſounds the breath, as it comes forth, is actually ſtopped in its paſſage, either at the lips, at the teeth, or at the palate; or elſe is permitted to paſs with ſome modification through the mouth or noſe. The organs of ſpeech then by which all ſounds are produced, are, 1. the lips; 2. the teeth; 3. the tongue; 4. the palate, or throat. Thoſe formed by the firſt are called LABIALS, by the ſecond DENTALS, by the third LINGUALS, and by the fourth PALATINES or GUTTURALS; among which there are ſome wherein the breath is permitted to paſs through the noſe, in which caſe they are called NASALS. Now as we ſee it is poſſible enough to aſcertain the number of organs, and what theſe organs are; it only remains to point out with equal certainty, how many and what changes they are capable of undergoing in the act of pronunciation; ſo as that each change may produce a ſound really diſtinct from the reſt. To purſue this enquiry,

which would deſerve a treatiſe of itſelf, cannot be attempted within the limits of this eſſay. We ſhall therefore take a ſhorter ſtep, and preſent the reader with a paradigm of all the ſimple ſounds that are to be met with in the learned languages; and perhaps it will be very difficult to diſcover any other in any language whatſoever.

A Paradigm

of all the simple Sounds that are to be met with in the learned Languages. First in the Short-hand Character, next in the common English and Latin Character, then in the Greek & Hebrew, each in their order.

MUTES and SIBILANTS.					LIQUIDS.
	Hard	Aspirate Hard	Soft	Aspirate Soft	
Dentals.	t τ ת	th θ ט	d δ ד	dh	l λ ל n ν נ Nasal r ρ ר
Labials.	p π פ	ph,f φ ף	b β ב	bh,v ב	Nasal m μ מ ם
Sibilants.	f σ ש	sh ס	z ζ ז	zh ζ	
Palatines.	k κ ק	kh,ch χ כ	g γ ג	gh,j	Nasal ng ג

	1	2	3	4	5	6
Vowels.	ee y ε	a η ה	a α	au ο א	o ω	oo ו
Long.	as in meet.	as in made.	as in ah, half.	as in fault.	as in hope.	as in Boot.
Short.	as in fit.	as in met.	as in fat.	as in fot.	as in but.	as in good.

Semi-vowels.	Dental y η	Aspirate h ח & the Greek Spiritus asper		Labial w υ

Compound Sounds us'd in the English, Latin & Greek Alphabets. Note. the Hebrew (ש) & the Greek (ε) are put with the (i) for the sake of Convenience but (ee) is their natural Sound.

pf ↓	γq	xx ξ	i ι	ou ϑ	u υ

This not being the place for conſidering the ſhort-hand characters, we think it proper to inform the learner, that the reaſon of our inſerting them here is partly to ſhew him their natural analogy, and comparative uniformity; but chiefly for the ſake of refering to them hereafter.

In the above ſet of articulate ſounds the letters of the Engliſh alphabet C, Q and X, are omitted for the following reaſons. C is an ambiguous letter, ſometimes expreſſing the proper power of the letter K, as in CAN; and ſometimes of the S, as in CERTAIN. Q is the ſame as KW; and the power of X is compounded of the two ſimple ſounds K and S.

In the Greek alphabet we alſo omit the ξ and ψ; the firſt for the ſame reaſon as we omit the X in the Engliſh, having the ſame power; and the latter becauſe it is a compound ſound, made up of the two ſimple ones P and S. The compound ſounds are noted at the bottom of the paradigm.

The powers of the Hebrew letters are all ſimple, on which account the Hebrew alphabet is the moſt regular. Yet it wants ſeveral more letters to expreſs all the ſimple ſounds; unleſs

unleſs we ſuppoſe that two diſtinct ſounds very nearly related, are in ſome caſes expreſſed by the ſame letter.

From this plan it appears, that there are in all twenty four ſimple articulate ſounds, and ſix vocal ones. If we were to conſult the analogy of alphabets we might eaſily perceive the great deficiency of ſome, and the no leſs ſuperfluity of others. For inſtance, the Syriac alphabet conſiſts of twenty two characters only. The Arabic of twenty eight. The Coptic and Perſic of thirty two. And the Ethiopic has ſtill more. The Eaſtern languages have eighteen or nineteen conſonants. The French fifteen. The Italians fourteen. And the Poliſh, or Scalvonian, have the ſame number of ſounds as the Engliſh, except the aſpirated TH. The Engliſh, as before noted, have three conſonants too many c, Q and x, the firſt ſuperfluous, and the two laſt compounded. They have likewiſe ſeveral ſimple ſounds, which, though their uſe is retained in ſpeech, yet are not marked with diſtinct characters. They ſeem only to be deficient in the power of the aſpirate ɔ though even this is retained among the Welch and Iriſh.

It

It may be noted in the foregoing ſcheme, that though the PH, SH, TH, CH, BH, ZH, DH and GH, are each of them marked by two letters, yet they are all ſimple ſounds, being no other than the hard and ſoft mutes aſpirated. Here obſerve, that the ZH or the SH ſoft, is as diſtant from the SH as the Z is from the S, or as B is from P, and bears the ſame relation thereto: for this ſound we have no diſtinct mark in the Engliſh tongue, but the French expreſs it by (J), and it is ſuppoſed by ſome that it is the original ſound of the Hebrew (ז), however the Engliſh ſometimes pronounce this very ſound, and expreſs it by the S in ſuch words as PLEASURE, MEASURE, TREASURE, &c. Likewiſe the DH, or the ſoft TH, is a ſimple ſound, which has alſo in our language no diſtinct character. Thoſe who learn the Hebrew with the points, pronounce the DALETH when it has no DAGESH in it by this ſoft TH. Though this articulation is not marked in our language, yet it is not unfrequently uſed; for ſometimes TH is pronounced hard, as in THICK, DEATH, &c. and at other times ſoft, as in THESE, BREATHE, &c. and you may compare theſe two ſounds together in

in the two words THIN, THINE, where it is evidently hard in the former, and ſoft in the latter. Theſe two ſounds TH and DH, as well as the two former, SH and ZH, bear juſt the ſame relation to each other as the T does to the D, or the S to the Z, although, through the imperfection of our alphabet, little or no notice is taken thereof.

In this ſcheme it may alſo be obſerved, that the long I as in THINE, and the long U as in MUTE, are not inſerted among the vowels. The reaſon is, they are each of them diphthongs. And we apprehend whoever carefully attends to the ſound of theſe two letters will find, that the firſt is compounded of the fourth vowel ſhort, and the firſt vowel long; and that the latter is compoſed of the firſt vowel ſhort, and the laſt long.

If you want to know the real ſound of any vowel, eſpecially a ſhort one, only protract the ſound, and you immediately diſcover it. To inſtance in the word SKIPTON, draw out the ſound of the two vowels, and you will eaſily perceive that the I has the ſound of the firſt vowel, and the O has the ſound of the fourth

fourth vowel; and in like manner you may judge of any other.

The diſtinction between a ſingle vowel and a dipthong conſiſts in this. The ſound of a ſingle vowel if drawn out ever ſo long continues the ſame from firſt to laſt; and the organs continue in the ſame poſition. In a dipthong there is a motion of the organs, and the ending is a different ſound from the beginning. A ſingle vowel in the ſame breath admits but of one ſound; a dipthong in the ſame breath admits of two ſounds diſtinct from each other. And it is remarkable that every real dipthong has in it the power of either the firſt or laſt vowel, or both, which are equivalent to the Y or W.

It is well known, that the manner of ſounding or pronouncing the vowels in the ſeveral countries where the ſame language is ſpoken, is what chiefly conſtitutes the different dialects. It may therefore be both uſeful and neceſſary to produce a number of words wherein, firſt the long and then the ſhort ſound of each vowel is exemplified.

	1 Vowel.	2 Vowel.	3 Vowel.	4 Vowel.	5 Vowel.	6 Vowel.
Long	be	baſe	calf	bawl	bone	bloom
	cheeſe	caſe	father	call	comb	cool
	deep	date	grant	dawn	doe	doom
	fee	fail	half	fall	fort	fool
	grief	great	laugh	gauſe	go	gooſe
	leave	late	laſt	law	lo	looſe
	me	may	mama	malt	more	moon
	plea	pain	papa	Paul	Noah	pool
	he	hail	paſt	Saul	pole	room
	heed	laid	ſtaff	tall	ſole	ſoon
Short	live	debt	am	cough	but	book
	rich	let	Ann	God	come	brook
	ſit	head	as	of	doth	look
	ſieve	well	at	ſot	love	root
	which	when	that	what	nut	took

If upon peruſing this table, the reader can pronouce every word in the ſame column with the ſame vowel, and thoſe in different columns with different vowels without altering his common way of ſpeaking, then it is evident that his pronounciation and ours are the ſame; but if not, they are ſomewhere materially different.

From the above table of words, the learner will eaſily perceive that the vowels as well as the dipthongs have no diſtinct mark to expreſs them by; but are frequently changed one for another, e. g. A, has the ſound of the ſecond vowel, as in ALE; of the third, as in ARM; and of the fourth, as in ALL. E, has the ſound of the firſt vowel, as in WE; and of

of the ſecond, ſhort as in LEFT. I, has the ſound of the firſt vowel both ſhort and long, as in MAGAZINE; SIT; of the third vowel, as in SIRRAH; of the fifth ſhort as in BIRD; and of a dipthong as in WISE. O, has the ſound of the fourth vowel ſhort, as in FOLLY; and of the fifth, as in GO; MONEY. U, has the ſound of the fifth vowel ſhort, as in MUST; and of a dipthong as in MUSIC. But beſides their being ſo frequently changed one for another, they are alſo often redundant and have no ſound at all, e. g. E after U, as in TRUE. A after O, as in ROAD. I before E, as in FRIEND; and after A, as in STAID. U before I, as in GUIDE; BUILD, &c.

What we have now obſerved of the vowels is alſo true of the conſonants, though in a much leſs degree. In the following inſtances ſeveral of them are changed from their proper powers; J, is expreſſed by G and DGE, as in GENTILE; KNOWLEDGE. PH has the ſound of F as in PHARISEE. K, is characterized by CH, as in CHAOS; and the power of Z is denoted by S, as in THESE, BUSY, &c. In the following inſtances they are mute and have no ſound at all. B before T, and after M, as

in DOUBT, DUMB. GH, in ſuch words as THOUGHT, NIGHT, &c. K and G before N, as in KNEEL, GNAW. L before K, as in WALK, TALK. P before S, as in PSALM. W before R, as in WRITE; and D before G is nearly ſilent, as in GRUDGE. From theſe inſtances it evidently appears, that letters of the ſame tribe, or which are formed by the ſame inſtrument or organ, are mutually interchanged one for another; and this liberty is taken in moſt languages *.

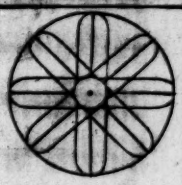
Thus according to our firſt deſign, we have as we apprehend ſettled what number of ſimple ſounds there really are; ſo far at leaſt as

* In words derived from other languages, the tranſpoſing of letters in the ſame claſs is very evident. To examine a few. The word MASS or DOUGH is in Latin MASSA, in Greek μαζα; and in Hebrew מצה is unleavened bread—DOOR Engliſh, THOR German, θυρα Greek, תרע Hebrew—GRUNT Engliſh, GRUNNIO Latin, γρυλλιζω Greek—COELUM Latin, שמים Hebrew—a BEAN Engliſh, πυαμος or πυανος Greek—EARTH Engliſh, TERRA Latin, ερα Greek, ארץ Hebrew, ארע Caldaic, from hence comes the Greek word αρο and the Engliſh word HARROW—Were this reciprocation of the cognate letters duly obſerved, it would be a clue to trace out the derivation of many words, whoſe origin muſt otherwiſe remain in obſcurity.

as will be ſufficient for the preſent purpoſe. It was neceſſary that this ſhould be firſt known, before it could be determined what number of ſimple characters would be wanted. We ſhall therefore go on to ſee how many ſingle lines or ſimple characters can be obtained, and for this purpoſe the following plate is inſerted.

The Elements of Short-hand

In General



In Particular

1st A Dot

2d A Line *in four directions*

3d A Circle *divided by a Horizontal & Perpendicular diameter*

Semicircumferences

Segments

4th An Ellipsis *in four directions*

1st Horizontal

Semicircumferences

Segments

2d Perpendicular

Semicircumferences

Segments

3d At 45° to the Right

Semicircumferences

Segments

4th At 45° to the left

Semicircumferences

Segments

Together they produce the following Sett; out of which the most simple & convenient are chosen for the Alphabet

This plate, entitled Elements of Short-Hand, may in a great meaſure ſupply the place of a teacher, as it ſhews the true formation of the ſimple characters and from whence they are derived.

The general figure which firſt preſents itſelf includes in it all thoſe particular ones that follow, and out of which are formed all the ſimple characters that can poſſibly be made.

The firſt and moſt ſimple expreſſion of the pen is a POINT or dot. But though this mark in its own nature is more ſimple than any other, yet as it is not capable of being joined with eaſe and diſtinction to a line, in any direction whatſoever; its uſes on this account muſt be greatly contracted. It can only be diſtinguiſhed by place, magnitude or number.

The next is a STRAIGHT LINE, which can be varied four ways. By DIRECTION, POSITION, THICKNESS and LENGTH; and when inclined to the right will admit of a character to be joined either at the top or bottom.

With reſpect to the firſt of theſe, it is plain that a ſtraight line can be drawn in every

every direction from the center of a circle to its circumference; while no more can be admitted as uſeful in ſhort-hand writing, but ſuch as can be preſerved clear and diſtinct from each other. Accordingly the HORIZONTAL, the PERPENDICULAR, and the two INCLINED LINES, the one at an angle of forty five degrees to the right and the other at forty five degrees to the left, or thereabouts, have always been found moſt convenient. Theſe we have choſen as the moſt eaſy, and beſt adapted to general practice.

Again, each of theſe characters can ſtand in a threefold poſition. IN, ABOVE, and UNDERNEATH the line of writing. But the two laſt, when much uſed, are enemies to beauty and uniformity, nor have they any advantages ſufficient to counterbalance this; we have therefore made but little uſe of either, and only in ſuch inſtances where they are moſt natural and eaſy.

Characters can alſo be diſtinguiſhed by thickneſs or breadth; but this diſtinction is inconſiſtent with freedom, diſtinctneſs and expedition, and therefore we have not ventured to make any uſe of it at all.

The

The different length or ſize of the ſame character is another manner of variation; and which if not uſed with great caution, will be frequently in danger of being miſtaken. This diſtinction we have never applied, but where the ſounds are near to each other.

But beſides theſe four ways of varying a line when it ſtands alone or disjoined, there are alſo ſeveral other methods whereby it can be diſtinguiſhed when in compoſition, or joined with others. Such as the joining one ſtroke full againſt the end of another---the drawing one line from the middle of another ---or the making of one line to croſs another.

What follows the ſtraight line is a circle, which we have divided by the horizontal and perpendicular diameters; the ſemicircumferences thence ariſing being not only better contrived for joining, but alſo more plain, eaſy and natural than thoſe ariſing from the inclined diameters. We make no uſe of the ſegments of the circle, becauſe when written in haſte they are not ſufficiently diſtinct from the ſemicircumferences on the one hand, or

the ſtraight lines on the other. Though this alone would be a ſufficient reaſon for denying them a place in this ſhort-hand, yet there is another reaſon no leſs important. If theſe be once admitted, then all that ſtock of ſimple characters ſo amply ſupplied by the ellipſis in its four-fold direction, muſt immediately be rejected: moſt of which are not only more plain and diſtinct, but alſo much better calculated for joining with others; nor like the former are they in any wiſe liable to be miſtaken, though they be written with the utmoſt expedition †.

The ellipſis being capable of ſtanding in as many directions as the ſtraight line, is therefore

† The ſegments of the ellipſis may be accounted ſimple characters, becauſe they can each of them be made with one ſingle daſh of the pen; and when well applied, can be written with as much eaſe and expedition as the ſemicircles themſelves. The only plauſible objection that can be made againſt them is, that a few of them are not ſo well adapted for joining with ſome preceeding or ſucceeding characters. But this objection does not ſo much lie againſt their degree of ſimplicity as the peculiarity of their form: nor will even this be any objection, if they are properly applied; as there are none of them but what will with great readineſs join either to the preceeding or ſucceeding character; and ſeveral of them to both.

fore ſubject to the like remarks. The four directions wherein this figure ſtands, will furniſh a great number of uſeful characters; many of which, can be joined with the greateſt readineſs to any line whether preceeding or ſucceeding. Thoſe that will not join with eaſe, or approach too near the form of compound characters, are for the ſake of clearneſs and conveniency, totally rejected.

Laſtly, the reſult of the whole is, that a great number of ſimple characters, clear and diſtinct from each other, are hereby produced. That this end could not have been obtained by any other method, may eaſily be conceived by a little reflection: it is from this ſource, that all the characters which are uſed in this method are derived; whilſt thoſe which are moſt ſimple and convenient, are choſen for the alphabet; or rather to expreſs thoſe ſimple ſounds, which are the elementary principles of all languages.

Having now obtained a good ſtock of ſimple characters, we ſhall go on to ſhew how they may be moſt naturally and conveniently applied to ſounds.

We had before occaſion to obſerve, that every articulate ſound is produced by the breath, proceeding from the lungs; which as it comes forth, is either actually ſtopped in its paſſage at the lips, the teeth or palate; or elſe is permitted to paſs with ſome modification through the mouth or noſe.

Now the letters by which theſe articulations are characterized, have been generally divided into MUTES, which have no audible ſound without ſome vowel: SIBILANTS, which have in themſelves an hiſſing or buzzing ſound: LIQUIDS, which have a certain obſcure ſound of themſelves: VOWELS, which have clear diſtinct ſounds: SEMIVOWELS or SEMICONSONANTS, which though vowels in their nature, yet in their uſe partake of the nature of conſonants. And the whole have been comprized, under the two general names of CONSONANTS and VOWELS.

Upon a careful ſurvey of the nature and manner of pronunciation, we find every articulation is either, 1. a DENTAL; 2. LABIAL; 3. SIBILANT; 4. PALATINE; 5. LIQUID; 6. a VOWEL; or 7. a SEMIVOWEL. We ſhall treat briefly of theſe ſeven claſſes in order,

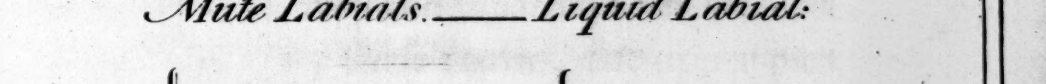
order, and as we proceed ſhall ſpecify the characters which nature leads us to appropriate to each articulation; by obſerving the poſition of the organs of ſpeech, with the paſſage of the breath in the act of pronounciation; which may certainly be imitated and deciphered by lines, although the ſounds themſelves cannot be. To effect this, we all along conſider the face as drawn in profile looking to the right.

The Position of the Organs of Speech & the Passage of the Breath in the Several Acts of Pronunciation delineated.

In the following Diagrams, we express the Lips by a Figure somewhat like to a Circumflex in a perpendicular Direction; the Palate by the upper curve Line; the under Jaw by ye lower; the upper surface of ye Tongue by the middle Line & ye Passage of the Breath by Dots: we likewise distinguish those Parts from whence we take the Characters, by a small hair Line.

The Position of the Lips in pronouncing the

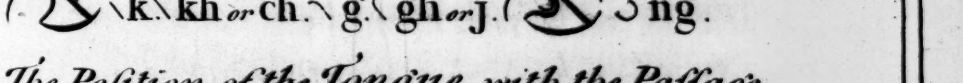
Mute Labials. ——— Liquid Labial:



The Position of the Tongue in pronouncing the

Mute Dentals ——— Liquid Dentals

Mute Palatines ——— Liquid Palatine.



The Position of the Tongue with the Passage of the Breath in pronouncing the

Sibilants. ——— Semi-vowels. ——— Vowels.

The circular Opening of the Mouth & Lips in pronouncing au. o. oo and w. is easier conceived than decyphered.

Iſt, The DENTALS are ſuch mute articulations as are made at, and againſt the TEETH. Theſe have been generally, though not ſo properly, called LINGUALS; becauſe their formation, as does that of moſt others, depends partly upon the poſition and motion of the tongue. The mute dentals are theſe four, T, TH, D, DH.

T, the HARD dental, is pronounced by raiſing the forepart of the tongue and placeing it hard againſt the root of the upper teeth, ſo as to ſtop the breath in its attempt to paſs out. By theſe means, the upper part of the tongue forms a line leaning forward, deſcending from right to left; which is its proper character.

TH, its ASPIRATE, as it is pronounced in the words THIN, HATH, &c. though it is marked by no ſingle letter in our alphabet; yet is as properly a ſingle articulation as the former. In pronouncing it we raiſe the tongue in the ſame manner as in the T, yet not ſo hard as to ſtop the breath, but permitting it to paſs with ſome difficulty: its proper natural mark therefore is that for the T lengthened.

D,

D, the SOFT dental, is pronounced in the ſame manner as the T, only the tongue not being placed quite ſo hard againſt the root of the upper teeth, the breath in attempting to paſs comes againſt the back part of the tongue and drives it into a curve with its convexity forwards; ſo that the upper right-hand ſegment of an ellipſe leaning forward is the moſt exact and natural mark for it.

DH, its ASPIRATE, is a diſtinct ſingle articulation, which we have no diſtinct mark for; its power is that of the ſoft TH, as in THINE, BREATHE, &c. and being properly the aſpirate of the D, ſhould have the ſame mark with it, only ſomewhat longer.

IId, The LABIALS intend ſuch articulations as are formed by the lips. In pronouncing them, the lips ſhut PERPENDICULARLY on each other; which directs us to perpendicular ſtrokes, either with, or without a curvature, as the fitteſt characters for them. The mute labials, which bear exactly the ſame analogy to each other, as the dentals do, are four in number, P, PH or F, B, BH or V.

P,

P, the HARD labial, is produced by ſhutting the lips cloſe and hard together in a perpendicular direction; while the breath attempts to come forth, but is for the inſtant completely ſtopped. The ſimple perpendicular line is the natural expreſſion for it.

PH, or F, is its ASPIRATE: the breath being forced forwards through the cloſed lips with ſome difficulty. Its character therefore moſt regularly according to analogy is the P, or perpendicular ſtroke lengthened, which we accordingly uſe after an aſcending line; but as this mark is inconvenient in other caſes, and tends to deſtroy the linear form of the writing; inſtead thereof, we diſtinguiſh it from P, by a ſmall curvature beginning backward, forming the upper right-hand ſegment of a perpendicular ellipſis.

B, the SOFT labial, is pronounced in the ſame manner as the P, only the lips are not ſhut ſo cloſe and hard together. Its moſt convenient character, diſtinguiſhing it from P and F, is a ſmall curvature at the top of the perpendicular ſtroke, making the upper left-hand ſegment of the perpendicular ellipſis.

BH, V, or U consonant, is its ASPIRATE, being the same with the power of B, only the lips are forced open, and the breath passes through with freedom. The character for the B inverted, is its suitable mark, being the lower right-hand segment of the same perpendicular ellipsis.

IIId. The SIBILANTS, though we have assigned them a place among the mutes, yet they are not absolutely such, because, in pronouncing them, the breath passes between the tongue and the root of the upper teeth, making a kind of hissing or buzzing sound. They have been generally, though not so properly, called dentals. These bear much the same relation to each other, as the two former classes, and are four in number, S, SH; Z, ZH.

S, the HARD sibilant, is expressed by raising the tip of the tongue, and placing it against the root of the upper teeth; but yet so as to permit the breath to pass on in an HORIZONTAL direction; which leads us to mark it by a short horizontal line.

SH, its ASPIRATE, is a distinct single articulation, as really as the other aspirates; though

though in Engliſh we have no ſingle letter for it. Its natural character, according to analogy, is the former lengthned.

Z is the SOFT ſibilant; for in expreſſing it, the tongue is not placed ſo cloſe againſt the teeth, as in pronouncing the power of S: it is therefore properly characterized by the mark for S beginning with a ſmall deſcending curvature, making the lower left-hand ſegment of an horizontal ellipſis.

ZH, or the SH ſoftened, is its ASPIRATE. It is a ſimple articulation, bearing the ſame relation to SH, as Z to S, or as B to P. There is no diſtinct mark for it in the Engliſh alphabet, but the French characterize it by J, and it is ſuppoſed to be the original ſound of the Hebrew ז. In Engliſh we ſometimes pronounce this very ſound, writing it by an S, in ſuch words as PLEASURE, MEASURE, TREASURE, &c. Its ſhort-hand mark according to analogy is the Z lengthened.

IVth. The PALATINES or gutturals are formed by placing the back part of the tongue againſt the back part of the palate near the throat; whereby the fore part of the

tongue falls down forward in an OBLIQUE DESCENDING LINE.

The mute palatines have much the ſame analogy to each other as the three former claſſes, and are four in number, K, KH; G, GH.

K, the HARD palatine, is pronounced by raiſing the back-part of the tongue againſt the palate of the mouth, while the fore-part falls down forward in an oblique line, deſcending from left to right; which is the mark we have choſen for it.

KH, is its ASPIRATE. Here the tongue is placed as in the K, only in pronouncing it the breath is forced through with ſome difficulty. Its proper mark then is that of the K lengthened. This articulation is difficult to an Engliſhman; but is very familiar to the Welch; and is ſuppoſed to be the true original power of χ in Greek, and כ in Hebrew.

G, as in GOOD, GET, (not as in GENDER, &c.) is the SOFT palatine; for it is pronounced in the ſame manner as the K, only the back part of the tongue is not placed ſo ſharp and hard againſt the palate. Therefore

fore its proper mark is the K, with a ſmall curvature forward at the top, making the upper right-hand ſegment of an ellipſis, deſcending obliquely from left to right.

GH, its ASPIRATE, is pronounced in the ſame way, only the breath is permitted to paſs forward at the top with ſome difficulty; its proper mark, therefore, is that of the K, with a ſmall curvature at the top, the contrary way to that of G, making the upper left-hand ſegment of the ſame ellipſis. This articulation is difficult to us; but there is reaſon to think it to be the original power of the Hebrew ח, and perhaps of the Engliſh GH, in ſuch words as THROUGH, RIGHT, &c.

The Engliſh, in order to avoid theſe two difficult aſpirations, have transferred them from the back to the fore-part of the tongue, which makes them more properly ſibilants, though they in part retain ſuch marks for them in the alphabet, as if they were palatines: for inſtead of KH, they uſe CH, and pronounce it as in CHARITY, &c. which is the complex power of TSH: and for GH they uſe DGE, as in GRUDGE; the ſoft G, as in GENDER; or the J conſonant, as in JUST: pronouncing

pronouncing it as the complex power of DZH, or the ſoft TSH. In the application of theſe marks to the Engliſh language, we have complied with this change of ſounds, and uſe the KH for the power of CH, and the GH for the power of the ſoft G, or J conſonant.

Theſe are the mutes and ſibilants; and it is remarkable, that theſe four diſtinct kinds or claſſes of articulations, do in nature bear ſuch a beautiful analogy one to another; each claſs having the HARD ſound and its aſpirate, with the SOFT and its aſpirate; which analogy we have ſtrictly preſerved throughout, in the characters appropriated to each articulation.

Vth. The LIQUIDS, even when without any vowels, have a certain audible but obſcure ſound in themſelves. They are in number four; L, M, N, and R.

L is a DENTAL, wherein the tongue is placed ſoftly againſt the upper part of the mouth, and the breath paſſes gently by, on either ſide of the tongue; ſo that the upper ſurface of the tongue is caſt into the form of a ſemicircle with its convexity downward;

the

the mark which we have chosen for it. The Welch have a peculiar way of aspirating this liquid, by placing the tongue hard against the root of the upper teeth, and forcing the breath strongly through on either side of the tongue. They express it in writing by a double L, and may justly be marked in shorthand by the former character enlarged.

M is properly a LABIAL; for in pronouncing it, we shut the lips together, as in P or B, and stop the breath, in its attempt to pass forward, only we here let the breath pass backward freely through the nose, so that M is a labial NASAL. For this reason, it is most naturally marked by the semicircle, with its convexity forward, imitating the position of the lips; and this makes its concavity backward, a proper expression of the free open passage for the return of the breath.

N is a DENTAL; for in pronouncing it we place the tip of the tongue against the root of the upper teeth; but it is a NASAL too, since the breath, stopped by the tongue, is permitted to pass upward through the nose. The upper surface of the tongue, now

very

very nearly resembles the semicircle, with its convexity upwards; and this is its natural character.

It may be proper to annex, in this place, that NG, as pronounced in SING, WRONG, &c. is a simple articulation, and is a LIQUID; for when it is expressed without a vowel it has a sound, though somewhat obscure, like the letter N: but it is also a NASAL PALATINE, the power of it being produced by placing the tongue, as in pronouncing the G, and permitting the breath to pass at the same time backward through the nose. Its most proper character, therefore, is the N turned back in the direction of the letter K, or of a palatine letter; for such is the curve that is made on the back part of the tongue in pronouncing it: viz. a semicircle with its convexity descending forward from left to right.

R is a DENTAL of a peculiar kind; for in pronouncing it, we turn up the tip of the tongue so tenderly against the root of the upper teeth, that as the breath passes, it makes a sort of a quiver or vibration. Here the very tip of the tongue is cast into the form

form of the quarter of a circle aſcending perpendicularly, and terminating horizontally towards the right. This in writing may be well expreſſed by a line anſwerable to the poſition of the tongue turning upon any preceeding one that deſcends. But if together with this we take in the paſſage of the breath, we have a ſemicircle with its convexity backward. This then is its proper complete character; but the former, which is deſcriptive of the poſition of the tongue only, may be beſt uſed after a deſcending line.

VIth. The VOWELS are, according to nature, diſtinctly ſix in number. In the three firſt, the tip of the tongue aſcends more or leſs towards the root of the upper teeth, without quite touching it; which ſuggeſts that they ought to be marked by lines ASCENDING from LEFT to RIGHT. Accordingly we have choſen, as moſt natural and convenient, the aſcending line ſhort for the firſt vowel; the ſame lengthened for the ſecond; and the third the ſame as the ſecond, only leaning a little more forward. Theſe two latter are ſo near to each other in pronunciation, and are

ſo ſeldom kept diſtinct in writing, that a greater diſtinction in ſhort-hand is unneceſſary.

In pronouncing the other three vowels, the mouth and lips are opened in a CIRCULAR or ELLIPTICAL form, which indicates that theſe ſhould be marked by a circle or oval. Accordingly we have choſen for the fourth vowel a ſmall circle; for the fifth a larger one; and for the ſixth an ellipſis or oval.

VIIth. The SEMIVOWELS, which may alſo be deemed ſemiconſonants, are ſuch articulations, as in their uſe partake of the nature of conſonants, though they have originally the nature of vowels; and they are theſe three, H, Y and W.

H, is nothing but a ſtrong ſenſible aſpiration; and therefore in characterizing it, we can properly take notice of nothing but the paſſage of the breath; which as it comes upward out of the throat, and proceeds forward horizontally through the mouth, directs us to mark it by the upper left-hand ſegment of an horizontal ellipſis. N. B. The H ſhould never be written, when it expreſſes the aſ-

piration

piration of a conſonant; this being fully provided for, in what we call the aſpirated letters. Neither need it be written at all before a vowel, except when the aſpiration is very ſtrong and ſenſible, and this occurs but ſeldom.

Y, is pronounced by raiſing the tongue almoſt perpendicularly, and placing it very nigh to, yet not actually touching, the root of the upper teeth; and is nearly of the ſame nature with the firſt vowel. So that its moſt natural character, is the lower left-hand ſegment of an ellipſis, leaning forward, and begun at the bottom. N. B. The writing of this character is never neceſſary but at the beginning of a word.

W, is no other than the laſt vowel uſed as a conſonant, and ſo requires no other mark. N. B. This character, as well as the Y, is never required to be uſed but at the beginning of a word; and then it has the next letter joined from the top, to diſtinguiſh it from the vowel.

Theſe are all the diſtinct ſingle articulations we can diſcover, in all the languages known to us; and the characters appropri-

ated to them, comprehend ALL the ſimple marks we can find, that may be written and combined with convenience.

Upon a review of the whole, it appears, that nature leads us to divide the ſeveral articulations of ſpeech into ſeven claſſes; four DENTALS; four LABIALS; four SIBILANTS; four PALATINES; four LIQUIDS; ſix VOWELS and three SEMIVOWELS; thirty in all: and that nature has furniſhed us with ſimple characters juſt ſufficient to mark them by, in a moſt natural, expreſſive and analogous manner.

The four lines deſcending from right to left, expreſs the poſition of the tongue in the DENTALS.

The four perpendicular lines, characterize the poſition of the lips in the LABIALS.

The four horizontal lines, anſwer to the paſſage of the breath in the SIBILANTS.

The five lines deſcending from left to right, correſpond to the poſition of the tongue in the PALATINES.

The four ſemicircles, decipher the poſition of the lips or tongue, in pronouncing the LIQUIDS.

The

The three lines ascending from left to right, describe the position of the tongue in pronouncing the THREE FIRST VOWELS. The two circular marks, express the openness of the mouth in the FOURTH and FIFTH; while the oval, exactly answers to the open position of the lips in the SIXTH VOWEL. And the characters for the three SEMIVOWELS, are evidently as natural and as expressive as all the rest.

The next thing to be considered and examined is, whether the characters as above applied are CONVENIENT for use, in due PROPORTION to the FREQUENCY of their OCCURRENCE in the English language.

The first thing necessary here, is to ascertain the comparative frequency of every letter in common writing; and then to mention those allowances, which must be made to accommodate it to the orthography of short-hand. In the following plate, the former of these is done by taking the proportions from a letter-founder's bill. We might indeed have taken another method, viz. by selecting ten or twelve pages out of some book, where the subject is general, numbering

numbering the letters of each ſort, and obſerving their comparative frequency. But the former method is much more preferable, upon ſeveral accounts; eſpecially ſince it muſt be ſuppoſed that the proportions in the letter-founder's bill are ſtated, as the reſult of many trials and long experience.

To accommodate the founder's bill to our preſent purpoſe, we have collected the ſeparate proportions of the ſmall, the capital and compound letters into one ſum for each letter. Double letters, ſuch as (ff) and (ſſ), are always written ſingle in ſhort-hand; we therefore in this caſe reduce the proportions of the letter-founder's bill by conſidering them as ſingle; and are, for the ſame reaſon, obliged further to leſſen the proportion of s, on account of the very frequent terminations (neſs) and (leſs) in both which the s is double but is not mentioned in the founder's bill, the one being the long and the other the ſhort s, for all which we ſubſtract one fifth part of the proportion of that letter.---As in ſhort-hand many of the vowels do not appear, we have taken only two thirds of each into the calculation of their proportions in the

the ſhort-hand orthography.---And as we have uſed each of the large ſemicircles to ſignify a liquid with a D ſucceeding it, we have alſo abated one third part of the proportion of the letter D.---The C has no diſtinct power of its own, but falls into the power of K or S, and is therefore left out of the ſhort-hand alphabet, and one half of its proportion is added to that of K; and the other half to that of S. And we muſt leſſen the proportion of N and G by one thouſand each, becauſe of the very frequent occurrence of NG as a naſal palatine. This is all the allowance we think neceſſary to make among the vowels and conſonants, except it be that the uſe we make of P in ſhort-hand, in expreſſing the particles A, AN, OF and THE, does more than treble its frequency; conſequently the uſe of T and F being taken away, in writing the words THE and OF, two thouſand muſt be ſubſtracted from the proportion of the former; and an abatement of about one half muſt be made for the latter.

This being premiſed, in order to apply the whole to our preſent deſign, we think it proper to put together each claſs of kindred letters

letters in one general proportion; because the power of one letter is frequently exchanged for that of another of the same organ, viz. T, D; S, Z; F, V; G, J; &c. which would be a source of much confusion and uncertainty, were not the letters thus placed in their distinct classes.

The Proportions of Letters

In the Long-hand Orthography	In the Short-hand Orthography			
a.....7910	2/3 e 8 y.....	= 10233	20,266 Vowels.	/
b.....2200	2/3 i.....	= 5333		/
c.....3400	2/3 a.....	= 5273		/
d.....4600	2/3 o.....	= 4760		o
e.....13050	2/3 u.....	= 2267		ı
f.....5000	2/3 w.....	= 1400		0
g.....2100	t, th – 2000.....	= 7600	26,716 Dentals.	ı /
h.....7300	2/3 d, dh.....	= 3066		ı)
i.....8000	n – 1000.....	= 6000		∪
j.....800	r.....	= 3500		c
k.....1300	l.....	= 4550		∩
l.....4550	3 p + 1/2 f.....	= 9100	16,500 Labials.	ı)
m.....3650	b + v.....	= 3750		⌈)
n.....7000	m.....	= 3650		)
o.....7140	s 3/5 + 1/2 c + sh 800.....	= 10,500	10850 Sibilants.	– –
p.....2200	z, zh.....	= 350		⌣ ⌣
q.....700	k, ch + 1/2 c.....	= 3000	5900 Palatines.	\ \
r.....3500	g – 1000 y + j + 1000 ng	= 2900		⌐ \ ∪
s.....10,000	1/10 h.....	= 730	1610 Semi-consonants.	⌐
t.....9600	1/5 y.....	= 460		/
u.....3400	1/5 w.....	= 420		0
v.....1550				
w.....2100	q.....	= 700	1300 Compounds	∀
x.....600	x.....	= 600		×
y.....2300				
z.....350				

Ascending lines e, y i, a, h, y, w, x & 2/3 r.....	= 26716	NB. j, is here taken single not treble.
Descending lines t, d, p, f, b, v, m, k, q, l (and 1/3 r.....	= 29499	
Difference allowed for raising the Pen at the Beginning of a Word.....	= 27.83	

The firſt column in this plate contains the proportional uſe of each letter, as taken out of the letter-founder's bill.---The next column ſtates the proportions with the neceſſary allowances, placing each letter in its proper claſs. Firſt, VOWELS; ſecondly, CONSONANTS, including four claſſes, viz. dentals, labials, ſibilants and palatines; thirdly, SEMICONSONANTS; fourthly, COMPOUND LETTERS. The order in which they are put is alſo anſwerable to the frequency of their occurrence. And over againſt them, in the next column, is ſeen the ſhort-hand marks for each letter.

With reſpect to the VOWELS, we need ſay nothing in favour of the characters we have choſen to expreſs them by; ſince every one can ſee that the line aſcending forward is by far the moſt eaſy for joining, and the circle or ellipſis, being capable of being turned every way, muſt be exceedingly convenient.

With regard to the CONSONANTS, the reader is deſired to remember, that if we place the ſimple ſtraight lines in the order of their convenience, they ſtand thus; 1ſt, the oblique line deſcending to the left; 2d, the perpendicular; 3d, the horizontal;

and 4th, the oblique deſcending to the right; and if the ſemicircles are placed in the ſame way they ſtand in this order; with the convexity, 1ſt, downwards; 2d, backward; 3d, upward, and 4th, forward.

As to the SEMICONSONANTS, H, Y and W, for the moſt part, they can have no diſtinct mark in the middle or at the end of words. H, being an aſpiration annexed to a conſonant, is fully provided for under the aſpirated letters. Y, has in the middle of words the power of the VOWELS E or I; and W after A, E and O, forms the fourth vowel AU, or the two dipthongs U and OU; and both are characterized accordingly. It is therefore ſufficient if we allow for their proportional uſe, the tenth part of H, and the fifth of Y and W.

There is likewiſe another great advantage attending the conſtruction of this alphabet. It may be eaſily demonſtrated that it preſerves the writing lineal; for, if ſetting aſide the characters O, U, N, L, S, Q and Z, as producing no aſcent or deſcent; we take the proportions for the letters E, Y, I, A, H, Y, W, X, and two thirds of R, as aſcending lines;

lines; and ſet theſe againſt the marks for the reſt, T, D, P, F, B, V, M, K, G, J, and one third of R, as deſcending ones; we ſhall find that the former is a ſufficient equipoiſe to the latter; allowing for the raiſing of the pen at the beginning of each word.

Thus it appears upon inſpection, that the ſum total of the ſeveral proportions in each claſs, is more or leſs, in the ſame ratio, as the characters are eaſy to be expreſſed, or convenient for joining with others.---That, in each claſs, a beautiful analogy is maintained among the characters.---That the aſcending and deſcending lines, occurring with equal frequency, muſt preſerve the writing lineal.---That many of the characters being of a curvilinear form, will render it the more beautiful. Beſides all theſe advantages, we may alſo add, that ſince the vowels as well as the conſonants are marked by lines, there is no occaſion for taking off the pen in the writing of any word, except for the ſake of ſome advantageous contraction.

Enough has been ſaid to ſhew how natural, ſhort, ſimple, rational and convenient the alphabet itſelf is. But after this is adjuſted

to the beſt advantage poſſible, yet ſtill it muſt be owned that ſome words and ſyllables will need to be contracted. We therefore could not but judge it of the firſt importance, that ſuch words as, on account of the idiom of the Engliſh, occur in almoſt every line and ſentence, ſhould be characterized by the very ſhorteſt marks. And ſhould this method of ſhort-hand be applied to other languages, ſimilar contractions ought to be uſed, adapted to the idiom of ſuch languages.

We have determined, for this purpoſe, to make the beſt uſe poſſible of the DOTS and PERPENDICULAR STROKES; two characters which are written with the utmoſt expedition, as well as take up the leaſt room. This we have done, without paying ſuch a ſcrupulous regard to their alphabetical ſignifications, as we have in all other caſes.

The DOT againſt the top we have put for the long I, which is a dipthong; and for the prepoſition IN. The dot againſt the bottom for AND, whether as a conjunction or a part of a word. The dot againſt the middle for the termination LY: and the dot over the top of a character for the termina-

tions

tions IFY, TION, SION, ATION, and ITION; two dots put over are made to ſignify IFICATION, all which occur with the greateſt frequency in the Engliſh language: whilſt the dot placed underneath a character, is uſed to indicate a DEFICIENCY in that word under which it is put: and an HORIZONTAL LINE underneath, denotes EMPHASIS or REPETITION.

We have put the ſhort PERPENDICULAR STROKE, above the line of writing, to expreſs the article A or AN; the ſame placed upon the line, ſignifies OF; and the ſame a little lengthened, ſtands for the article THE.

The termination COVER, is marked by putting a ſhort K over a character; and the termination ITY, by putting a ſhort T over.

We have thus provided for the words and ſyllables which moſt frequently occur. Thoſe in the NEXT DEGREE of frequency, are each of them marked by a SINGLE LETTER of the alphabet ſtanding alone; and that letter is the firſt conſonant of the word thereby denoted, as B for BE, BEEN, BY; D for DID, DIDST, &c. excepting the large O for HOW, and X for CHRIST. And as the ſhort T is

the

the moſt ſimple of them all, we have made it, ſtanding on the line of writing, to ſignify TO, UNTO; above the line, to mean IT; and over the top of a character ITY: two T' written cloſe by each other, ſignify ET CETERA.

Our next care was, to provide an expreſſion for the moſt uſual COMPOUND SOUNDS, in a brief and analogical manner. Wherefore, beſides the lengthening of the ſtraight lines, to ſignify an aſpiration, as CH, SH, and TH; we have alſo enlarged the ſemicircles, to denote the liquids they ſtand for, with a D annexed; as LD, MD, ND, and RD. As the X, or KS, is a line acroſs; ſo the KT, or CT, is expreſſed by a ſhort line full againſt the end.

The A, with a curvature forward at the top, we put for ABLE, and IBLE, being very near to the mark for AL. The M is lengthened to ſignify D'M. The R is lengthened to ſignify WR. The W, with a ſhort line pointing inwards, ſignifies WITHIN; and a dot in the middle of it, means WORLD. For the ſake of conveniency, J and G, after an aſcending, or horizontal line, are written in the

ſame

ſame manner: this liberty may be taken, without occaſioning any confuſion, ſince we know, that in Engliſh, the letter G ſtands for the ſoft ſound of J, as in GENESIS; as well as the hard ſound of G, as in GIVE. For the ſake of brevity, and to preſerve the writing the more lineal, the letters D, P, and T, are turned up parallel to themſelves, to ſignify a repetition of the ſame, with a vowel between. The ND, or END, when turned back in the direction of ING, is ENDING: and the D, with MON ſtruck upward, is made to ſignify DEMONSTRATE, DEMONSTRATION.

All the reſt of the contractions are regularly made from the letters of the alphabet, by joining together ſuch two or more of them, as were found ſufficient, to diſtinguiſh what they reſpectively ſignify from any other word, e. g. ANS, for ANSWER; BO for BOTH, &c. We have carefully examined all the common words in the Engliſh, particularly the undeclined ones, to ſee which of them ſtood in need of any abbreviation: and have compriſed the alphabet itſelf, with all the abbreviations we found neceſſary, in the compaſs of one plate. And although there are ſometimes more

ſignifications

ſignifications than one, applied to the ſame character; yet ſpecial care is taken, not to create any confuſion, or occaſion any miſtake thereby.

In this ſcheme of SHORT-HAND, we have avoided the uſe of any thick ſtrokes; and have no treble lengths or ſizes, except in the caſe of the circle, which will eaſily admit it; by this means, the writing is the more diſtinct and legible. The vowels alſo being expreſſed by characters regularly joined, and no places for contractions uſed, but ſuch as are out of the line of writing; it therefore follows, that the words may be written as ſmall, and as near to each other as you pleaſe, without the leaſt danger of confuſion.

As there is ſometimes an occaſion for figures and ſtops in ſhort-hand, a plate is annexed for that purpoſe.

Alphabet &c.			Letters enlarged.		Shortening Rules.
a 2 nd Vowel	/	-ai -ay			
b	ʃ	be, been, by			
d	ʃ	did -st			d at the end of a word may be struck upward e.g. ⌒ led ⌒ fed
e st 1. Vowel	/	ee & i short			e or t put over a Character is -ity, e.g. ⌒ pity ⌒ witty
f	⌒	ph-ful from			f after an Ascending line is made by the p lengthened e.g. ⌒ af ⌒ ef
g	⌒	God			g after an Ascending, or Horizontal line is made by j thus -ag-aj -eg-ej
h	⌐	he, his			
i Diphthong	·	in-I Eye, in			i and the preposition in is a Dot against the top e.g. ⌒ I did ⌒ within -ly Terminative is a Dot against the middle e.g. ⌒ duly ⌒ study
j	⌐	-dge Jesus			
k Th and c	⌐	-ck-kind could -st	⌐	-ch-teh- which	-ct-kt is a short line made full against the end e.g. ⌒ direct ⌒ affect k put over a Character is -cover- e.g. ⌒ recover
l	⌒	Lord, will-t ⌒ I'll	⌒	-ld-held- would -st	
m	⌒	him, am ⌒ Emphasis	⌒	-md- made -st	
n	⌣	on, upon	⌣	-nd-end end	
o S Vowel	o	-oa ch ○ -ou how			o made small is au-aw; made large is ou ow, e.g. -saw ○ sow o-ou turned round the end of a Character is ound-ound e.g. ⌒ bond ⌒ bound
p	⌒	of ⌒ these the ⌒ a an			
qu	⌒	question			
r	⌒	are, art, her	⌒	rd-ward word	r after ⌒ is struck upwards thus ⌒ br ⌒ dr ⌒ fr ⌒ gr ⌒ jr ⌒ kr-cr ⌒ kmr ⌒ chr ⌒ lr ⌒ mr ⌒ pr ⌒ tr ⌒ thr ⌒ vr when a short Vowel comes between, a short line is drawn from y middle thus ⌒ ber ⌒ der
f and ept c	—	is, us	—	sh-ish shall -t	An Emphatical word or the Repitition of a word or sentence, is expressed by an Horizontal line put underneath e.g. ○ oh, oh, oh,
t	/	to, unto / it	/	th-eth	eth when it expresses the third person singular of the English Verb, may be changed unto s e.g. comes for cometh ⌒ brings, for bringeth &c.
u Diphthong	⌒	-eu -ew			u may be written in any direction e.g. ⌒ pu ⌒ tu ⌒ su ⌒ ku
v	⌒	have			
w S Vowel	⌒	wh-with			
x	⌒	-ks Christ			x and ks are expressed by a short line drawn across the preceding or succeeding Character e.g. ⌒ expel ⌒ extol ⌒ breaks ⌒ vex &c.
y Consont.	⌒	ye, you			
z	⌣	as, has-t			

Parts of Words.

ab-about | ad-add, had-st | al- | able-ible | ant-a-e-i | as-

bene-beneath | ban-ben-being

ded-det Dead, debt | d'th Death | der-dure | de-div-e

ed-head Head | el- | ef-eaf-case

for-e

ng-ing thing | ink think | ge-give give-s-n | govern- Govern-ment

fy-tion-ation-ition is a Dot put over e.g. ė purify ȯ Notion ȯ Nation ification by 2 Dots e.g. ë Qualificat.n The Dot put underneath shews the word to be abbreviated e.g. ṭ extraordinarily
and-and is a Dot against the bottom e.g. ḍ command ṇ slander ḷ and then. Two Dots put against the foot Horizontally denote the omission of two or more words.

-ject object

can-ken-con-can-st | contr-a-i-o contrary | -com-e come

-lk-like | -lm

-d'm-dom- | -mem-ber. Member | men-t -Men | -mental | multi- multiply

-nding ending | na-nay | -ne-ny any | -ness necessary | -ence-hence | -ngth | enter-inter-intro

-od-hood | -oi-oy | old-hold Old, hold | -om-whom whom

-po | -vo- | -voi- | -p'nt-point Point

-war-wor-where were-t, where | -ra | -re-ry | -rk | -reh-arch | -rn | -retro- rather

sa-say | se-sive-ceive see | sf-self-selves | super-subter- | circum- circumstance | -tience | -ses-sis | -tious

satis-as it is | sov-sever | ser-cer-sur-s. | scrib-e-scrip-t-scripture

te-tive to the | there there their | tran-t-transgress | -tet-tate-ted that | -teth-th'd

-uo

-ved | -vel-vol-veal- | -volve-volution | -van-ven- Heaven

wo-who-who

extra-extravagan-t-ce

-tient-tiate

Undeclined Words &c.

age, again-st | acknowledge | according-to | alone | answer | after-wards | hath

before | beyond | both | besides | between, betwixt | above | because

difficult-y | differ-ent-ence | done, down | do-es-th | demonstrat-e-ion

if | immediat-e-ly | even | hereby | herein | here of | evident-e

for | frequent-ly

gave | godly | Gods | glory-is-eth-ous | good-ness | great

Jesus Christ

Church, Kirk | Children | concern-ing | consequen-t-ce

little | Lords | likewise

may-st | Man | more | Mr. | might-st

another | notwithstanding | nevertheless

often-times | alway-s | also | one, own | under-stand-ing | only | otherwise

of the | People | particular-ly | peculiar-ly

whereby | wherein | whereof | wherein | wherewithal

Religion, religious | hers | Righteous-ness

should-st | sufficient-ly | signify-cation | save-iour | Sovereign-ty

some | sometime-s | somewhat | Subject-ion | especial-ly

together | them | than, than | thank | therefore | through-out

this | these | thus | those | &c.

ever-y | very-ly | everlasting-ly

within | without | World-ly | Worlds

Christian | except-ed-eth

your | yours | yesterday

Observations on the preceeding Plate

I. Column contains the letters of the Alphabet in their usual order, against which are some words of the most frequent occurrence, which those letters signify when written alone or disjointly. That the Learner may know how to write the Characters, we here put a dot to shew from what part they are begun. a b d e f g h j k l m n i p q r. f t v o w y z The i is the Dot itself put above the line of writing. The circular Characters may be turned any way. The x w & is expresid by a line across may be written in any direction, & where it is convenient, the succeeding Character may cross the preceeding, e.g. flexible Vixen &c. The a & e being struck upward have the following Character joined to the top e.g. al es; while the t & th being struck downward have the next Character joined to the bottom e.g. ts thl. The h and y also are begun from the bottom. The w & wh begining a Word, have the next Character joined to the top e.g. we when what &c. The Characters for the Words I in, a an, I'll, I'm, it, are to be written higher than those for and the, of, will, Lord, him, am, to, unto, as may be seen in the Plate.

II. Column contains several of the letters of the Alphabet enlarged. The three straight lines for t, f & k made longer, uniformly intimate the Aspiration of the h after them th, fh, ch. The four semicircles, for the Liquids l, m, n, r, when enlarged, always suppose the d after them ld, md, nd, rd.

III. Column contains several Rules for shortening words, either by writing the Characters disjointly, or by drawing a short line across, or full against the end, or from the middle of the preceeding Characters. When i, ify, tion, ation, ition or and come in

the middle of a word the Dot may be omitted & the next Character put in its place e.g. silent sign Nations National Notions pacifying qualifications Commandment. When i begins or ends a word the Dot must be written e.g. Irony die. In like manner when in begins a word the Dot must be written, but in the middle & end it is expressed by the Letter n e.g. intent sinner since &c. When it is convenient the Stroke full against the end for ct-kt may be omitted & the next Character put in it's place e.g. director Character Sector &c. But when ks or kt follow a Circular Vowel they will be more easily expressed by the Natural Character e.g. Books talks Structure &c. The Rule for expressing r with a Short Vowel before it by a Stroke from the middle of a preceding line, may be extended to ascending & Horizontal lines as well as to descending ones e.g. Mayor Tenor Sharp.

IV.th Column contains Characters for parts of Words formed from those in the three preceding Columns. The m made long is d'm=dom. The r made long is war-wor-where were, where. The t turned up Parallel to itself is made to intimate a repetition thereof with a Short Vowel between; & so is the d. To avoid obtuse Angles, the following combined Letters are written thus. ad ed am em al el dn gn jn. km kn na ne ra re fa fe tn Also the Semicircles may be most concisely & conveniently joined in this manner mr rm ln nl lm rn.

V.th Column contains several of the particles of Speech viz. Pronouns, Adverbs, Conjunctions & Prepositions; together with some other words that frequently occur, which are contracted by

writing so many Letters in each, as sufficiently distinguish it from all others.

In each of these 5 Columns, what are Engraven in Running-hand are whole words, & stand as significations to their respective Characters, when written alone; and what are in Roman letters, are expressive of parts of Words only.

The method of Writing according to the Orthography of Short-hand.

No more letters are to be written in a Word than are just necessary to give the sound thereof. There are in every word a kind of radical letters which when written, do as sufficiently distinguish it, as tho' every Letter was inserted. These for the most part are Consonants, & in Short hand, every double Consonant should be written single; as l, m, n, f, t &c. for ll, mm, nn, ff, tt &c. The Vowels, in general, are frequently of no farther use than to facilitate the pronounciation, by means of their intervention: And therefore in the middle of words may often be omitted with safety. The letter h may commonly be omitted: Yet in the names of Persons or Places &c. it had better be inserted. In short, this method of Writing requires that the proper power of each letter be always retained; & such letters only, expressed in a word, as are just necessary to give the sound thereof. Take the following instances for illustration.

Active is expressed by	Aktv	thus	Horizon is expressed by	Orizn	thus
Ale	Al		Night	Nit	
Anarchy	Aurke		Olympick	Olmpk	
Bright	Brit		Potent	Potnt	
Cypher	Sifr		Sought	Saut	
Carriage	Kraj		Usurp	Usrp	
Fell	Fl		Excellent	Xlnt	
Fall	Faul		Yellow	Ylo	

From this short Specimen, it is easy to judge of the Orthography of Short-hand. When the proper Power of each letter is once known & fixed in the Memory, a habit of Writing from Sound only, will be attained with little or no difficulty. This method of Leaving out the Short Vowels will be no disadvantage, for in the reading you can readily supply them: But it will have this advantage, that whenever any Vowel is written in the middle or at the end of a Word, you will then understand that it means a long or accented Vowel.

The Diæresis: or the Method of expressing two or more Vowels when they meet in the same Word, but belong to different Syllables.

This Rule which is seldom required to be used, may be comprized in the three following observations.

I^st. Where both the Vowels are rectilineal, let the latter be made parallel to the former e.g. Laiſb create mea &c.

II^d. Where one Vowel is Circular & the other Rectilinear, let the Circular one be turned forward e.g. poem ſuero

III^d. Where both Vowels are Circular, begin the first from the top & let the other be turned round over it e.g. duo ſuo tuo &c.

The manner of Contracting long Words & Sentences.

Any such long Word or Name &c. as must necessarily very often occur, in the taking down of any Speech, Sermon, Tryal, Lecture &c. having been once Written at length may

be shortened, by writing so many Letters only as are just necessary to distinguish it, & then putting a Dot underneath to point out the abbreviation e.g. Contradistinction & transubstantiation &c. see shortening Rule Plate 5. against the Letter i.

In like manner any particular Phrase, which from the nature of the Subject will require to be often repeated, such Sentence or Phrase having been once written at length may be abbreviated by placing two Dots against the foot of the preceeding or succeeding Character in an horizontal direction, to denote the omission e. g.

last Will and Testament. or last Will and Testament.

Finally Brethren whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are Lovely, whatsoever things are of good report: if there be any virtue & if there be any praise, think on these things. Phil. 4.8. See shortening Rule Pla 5. against the letter i.

The Method of Joining Several Words together.

Any two or more words coming together in the same Sentence & having their sounds fully expressed by Characters, may be joined together without much danger of confusion, But this practice, which is better calculated to deceive the Eye by a specious appearance of Brevity, than to compass any real advantage in the Art itself, we can by no means recommend not only because it is an Enemy to beauty but also to expedition, tires the hand & burthens the memory.

x

Figures

Number is already express'd by Characters sufficiently short & distinct every Unit under Ten having a different sign to denote them by yet in Cases where Secresy is required the following sett may be made use of.

1 2 3 4 5 6 7 8 9 0.

Example.

110 100. 188. 299. 377.

212. = 33. 44.

£124 „ 6 „ 7

769 „ 3 „ 2

£893 „ 9 „ 9.

Stops

In Short hand writing Stops are seldom necessary; but when they are, the following are the most convenient.

Comma , Semicolon ; Colon | Period | Question, or Note of Admiration

Afress Paragraph ^ Caret ( ) Parenthesis " Quotation "

If the reader has underſtood and well digeſted what he has now read, the neceſſity of any further inſtruction is almoſt precluded: yet the following advice may not be uſeleſs.

The alphabet ſhould be familiarized in the firſt place: it may be ſeen from what general figure the letters are formed, by recurring to plate II. and where each letter begins by reading plate VI.

Let him next take notice of the uſes of the alphabet, and enlarged letters, contained in the firſt and ſecond columns of plate V.

In the next place it may be proper for him to write a page out of ſome book, agreeable to what he has learned in thoſe columns; expreſſing each ſounding letter diſtinctly, only taking care not to make two diſtinct marks for any combined letters, which, in thoſe columns, he finds expreſſed by one mark.

Having done this, he may proceed to make himſelf acquainted with the general rules of contractions, and the abbreviations contained in the other columns. This may be eaſily done, by obſerving how the alphabetical order is retained in each line of plate V. which

contains all the characters uſed in this ſyſtem; and by reading the further explications in the ſucceeding plates.

This being effected, he may now attempt, with care, to write out of the Bible any of thoſe ſentences that are contained in the following ſpecimen, afterwards comparing what he has wrote with the ſpecimen.

It ſhould be carefully obſerved, that every letter in the ſame word muſt begin exactly where the former letter ends, without taking off the pen; unleſs otherwiſe directed.

When the learner has by theſe means obtained an habit of writing tolerably correct, let him embrace every opportunity of practiſing; only taking care never to lay by what he has written, without peruſing it again and again, till he can read it with eaſe and freedom.

In writing after a ſpeaker; whenever any phraſe or quotation occurs, that he can either eaſily remember or afterwards refer to, he need write no more than what is juſt neceſſary to refreſh his memory, or direct him to the place from whence it was quoted; denoting the chaſm by two dots placed horizontally,

ly, or by two T' placed near together, ſignifying et cetera.

If he has occaſion to write any words or ſentences in the Hebrew or Greek languages, he may find the characters that anſwer to the letters of either alphabet in the paradigm, plate I. He may alſo adopt and apply to either of theſe languages, the enlarged ſemicircles to ſignify the ſame compound ſounds as they do in the Engliſh.

The rules for the attaining to an eaſy and expeditious manner of writing ſhort-hand, are chiefly ſuch as are applicable to the common long-hand.

Let the preſſure of the fingers upon the pen, the hand upon the paper, and the arm upon the table or deſk, &c. be as little as poſſible; while the motion of the pen muſt be made by the fingers, and not by the whole hand: otherwiſe in long and continued writing the hand will be tired, and its progreſs greatly retarded. But this rule is more eſpecially applicable to ſhort-hand, in which the aſcending and deſcending ſtrokes ſhould be made of an equal thickneſs or breadth.

Let him lay his paper or book ſtraight before him, and not ſloping: by this means the characters will appear more beautiful, and, what is ſtill more material, will be formed with greater exactneſs.

Let there be no ſtoppage of the hand in taking off the pen to begin a freſh word or character.

By a due obſervation of theſe three rules, an habit of writing with great expedition may ſoon be attained.

To complete the whole, and to prepare himſelf for writing in public, let him get ſome perſon to read to him every day for about half an hour, giving proper notice when to read ſlower and when quicker. Thus, each day, he will perceive what advances he has made. It will be beſt for him to proceed in this manner, till he is ſo ready at writing, as to be capable of expreſſing the characters in the ſame time that the words themſelves can be diſtinctly pronounced. SCRIBENDO DISCES SCRIBERE.

Here it may be neceſſary to obſerve, that when it is required, the characters may be written much ſmaller, and cloſer to each other,

other, than what they are in the following ſpecimen; where we have purpoſely made them large, that they may appear the more diſtinct: otherwiſe fewer plates by one third would have been ſufficient to have contained the ſame things.

Verses	The 9 Chap. of Ecclesiastes.
1	[illegible]
1	[illegible]
	[illegible]
	[illegible]
	[illegible]
1	[illegible]
2	[illegible]
	[illegible]
	[illegible]
6	[illegible]
1	[illegible]
	[illegible]
	[illegible]
1	[illegible]
	[illegible]
7	[illegible]
8	[illegible]
	[illegible]
	[illegible]
9	[illegible]
	[illegible]
	[illegible]
10	[illegible]
	[illegible]
	[illegible]
11	[illegible]
	[illegible]
	[illegible]
12	[illegible]
	[illegible]
	[illegible]

117.th Psalm.

Verses	The Lords Prayer. Mat. 6. 9 to 14.
1	[illegible]
1	[illegible]
	[illegible]
	[illegible]
	[illegible]
1	[illegible]
	[illegible]
	[illegible]
2	[illegible]
	[illegible]
	[illegible]
3	[illegible]
	[illegible]
	[illegible]
4	[illegible]
	[illegible]
	[illegible]
5	[illegible]
	[illegible]
	[illegible]
6	[illegible]
	[illegible]
	[illegible]
7	[illegible]
	[illegible]
	[illegible]
8	[illegible]
	[illegible]
	[illegible]
9	[illegible]
	[illegible]
	[illegible]
10	[illegible]
	[illegible]
	[illegible]
11	[illegible]
	[illegible]
	[illegible]
12	[illegible]
	[illegible]
	[illegible]
13	[illegible]
	[illegible]
	[illegible]
14	[illegible]
	[illegible]
	[illegible]

The 1.st Psalm.

The 11.th Chap. of Job.

Verses 1.st Epistle of John, 5.th Chap.

1 [illegible]

2 [illegible]

3 [illegible]

4 [illegible]

5 [illegible]

6 [illegible]

7 [illegible]

8 [illegible]

9 [illegible]

10 [illegible]

11 [illegible]

12 [illegible]

13 [illegible]

14 [illegible]

15 [illegible]

16 [illegible]

17 [illegible]

18 [illegible]

19 [illegible]

20 [illegible]

21 [illegible]

The General Epistle of Jude.

1 [illegible]

2 [illegible]

To introduce the learner into the following specimen, we here give him at length the contents of the first plate.

" AN ATTEMPT TO EXPLAIN AND DEMON-
" STRATE THE MECHANICAL PRINCIPLES
" OF NATURAL PHILOSOPHY.

" Various attempts have been made in
" every age, to account for the grand pheno-
" mena of nature, to the satisfaction of the
" rational mind.

" The ancient philosophers had recourse
" to substantial forms and occult qualities:
" while the moderns have been very ingeni-
" ously employed in making curious enter-
" taining experiments, and have learnedly
" appealed to mathematical demonstration;
" explaining and evincing the nature and
" properties of centripetal and centrifugal
" forces, thereby to investigate the laws of
" nature, and the secrets of its operation.
" The result of which is, that they have ob-
" tained a notion of various kinds of attrac-
" tion and repulsion; the laws and proper-
" ties of which they can give a very accurate
" account of in the mathematical way. But

" after

" after all their demonſtrations, they have
" not been able to aſſign the cauſe; or de-
" ſcribe the nature and operations of theſe
" attractive and repulſive powers, in a me-
" chanical way, by all their learned diagrams
" and calculations. For this reaſon, theſe
" powers ought ſtill to be conſidered, in this
" reſpect, as on a level with the occult or
" hidden qualities of the ancients. For it is
" evident, that in natural philoſophy, where
" mechaniſm ends demonſtration ceaſes; and
" muſt be ſupplied by meer ſuppoſition, or
" by the uſe of terms and phraſes, under
" which we can form no regular idea. What
" is then ſtill wanting, after all that has hi-
" therto been inveſtigated is, to ſhew the
" nature and cauſe of theſe qualities or pow-
" ers; and thence to demonſtrate, in a way
" of mechanical reaſoning, what is, and muſt
" neceſſarily be the manner of their opera-
" tion. This is what is aimed at in the ſuc-
" ceeding pages, on the ſimpleſt and moſt
" natural principles, without diſparaging ei-
" ther the mathematical demonſtrations, or
" curious experiments of modern philoſo-
" phers.

" The

" The whole of the following demonſtra-
" tion is grounded on one definition and one
" axiom, applied to a few indubitable and
" well known matters of fact.

" The definition is this: matter is an ex-
" tended, ſolid, inactive and moveable ſub-
" ſtance. The axiom is this: NIHIL AGIT
" IN DISTANS; nothing acts but where it
" exiſts. The indubitable matters of fact
" will be mentioned as occaſion requires.

" The propriety of the above definition of
" matter, will ſcarcely admit of a diſpute;
" for every one of theſe properties will ap-
" pear to be eſſential to it, by only a naked
" conception of it: for let a quantity or a-
" tom of matter be ſuppoſed to ſtand by it-
" ſelf, without any thing contiguous or an-
" nexed, and we ſhall then be obliged to con-
" ceive, that this matter is (1.) Extended, or
" has the three dimenſions belonging to it;
" for never a one of the three dimenſions
" can totally be taken from it, without de-
" ſtroying its very exiſtence. (2.) This a-
" tom, or quantity of matter, is ſolid to ſuch
" a degree, or in ſuch a complete ſenſe, that
" it abſolutely occupies the ſpace it exiſts in;

" and cannot admit any other quantity of " matter to occupy that ſpace, or any part of " it, at the ſame inſtant of time. For, al- " though moſt bodies are porous, and have " room for matter to be introduced into thoſe " cavities; yet the matter itſelf of which the " body is compoſed, can have no pore in it. " (3.) This atom, or quantity of matter, is " in itſelf inactive; it cannot act on itſelf, " nor of itſelf act on any thing elſe, being in " its own nature dead and inſenſible: and " yet, (4.) This atom, or quantity of matter, " is moveable, or capable of being moved by " any external force put upon it; for, if it " is ſuppoſed to ſtand by itſelf, it can have " nothing attending it to hinder its motion " any way if impelled, and it ſurely has no- " thing in its nature to fix it to that part of " ſpace it is ſuppoſed to be now in.

" The axiom, that NIHIL AGIT IN DIS- " TANS; or nothing can act but where it " exiſts, is ſelf-evident only with this diſtinc- " tion; matter may indeed act on a thing at " a diſtance from it, ſuppoſe there be ſome " proper medium or inſtrument through and " by which it may thus act. Now this me-

" dium,

" dium, by which matter ſometimes acts at
" a diſtance, muſt either be material or ſpi-
" ritual. If material, then one atom of
" matter acts on the next in contact ſucceſ-
" ſively. If it be ſpiritual, then the matter
" muſt be ſuppoſed to act on this ſpiritual
" medium, in a way quite inconceivable to
" us, and perhaps the conception itſelf is too
" groſs to be admitted: but if there be no
" ſuch medium, then a quantity of matter
" cannot act any farther than the ſurface of
" its own dimenſions; ſo that the axiom may
" be expreſſed more accurately thus, NIHIL
" AGIT IN DISTANS, SINE MEDIO; or no-
" thing can act on what is at a diſtance from
" itſelf, without ſome fit and proper medium
" intervening.

" On this definition and this axiom all
" proper mechaniſm is founded. For unleſs
" there be extenſion, ſolidity, inactivity and
" mobility in matter, there is no room for
" mechaniſm; and if any more properties be
" introduced, they muſt be more than me-
" chanical, and ſo cannot come under the
" laws of mechaniſm.

" From the extenſion of matter, we learn, " that every quantity of matter, great or " ſmall, muſt have ſome ſhape and ſize.

" From the ſolidity of matter, we learn, " that no two atoms of matter can exiſt in " the ſame place, preciſely in the ſame in- " ſtant, or that every quantity of matter " excludes all other matter from the ſpace " itſelf at preſent occupies; for if the parts " of matter could penetrate each others di- " menſions, one part of matter could make " no impreſſion on any other part, even by " contact itſelf: or perhaps it may be better " expreſſed thus; there would be no contact " at all, if matter were not thus impenetra- " ble.

" From its natural inactivity, connected " with the above axiom, we learn, that mat- " ter cannot move itſelf; that it cannot in " itſelf have any tendency to move more one " way than another; that every quantity of " matter any way in motion is a patient, or " is acted upon; that matter cannot act any " farther than the ſurface of its own body " extends, ſince an abſolute vacuum can nei- " ther produce, nor prevent, nor convey mo-

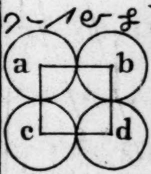
" tion;

" tion; that it cannot magnify or diminiſh
" its own dimenſions; that it cannot alter
" its own ſhape or figure; that it cannot
" draw any other body to itſelf, or drive any
" other body from itſelf, to any diſtance.
" And though there are ſome appearances in
" nature which ſeem to contradict this poſi-
" tion, yet theſe phenomena cannot be ac-
" counted for from the pure nature of mat-
" ter itſelf, but the cauſe, either mechanical
" or ſpiritual, muſt be ſought after.

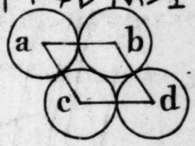
" From the mobility of matter, we infer,
" that it has no averſion in itſelf to motion
" or reſt; or that it may be at reſt or in mo-
" tion at different times," &c.

The learner ſhould neither be ſurpriſed nor diſcouraged if while the art is not yet familiar to him, he ſhould at firſt meet with ſome little difficulty in making out the reſt; but he may aſſure himſelf, that the pains he takes to read, will much contribute to render both the writing and reading familiar and eaſy to him: and poſſibly ſome ideas he gathers from thence may be found new, entertaining and inſtructive.

An Attempt to Explain & Demonstrate the Mechanical Principles of Natural Philosophy.



a,b,c,d,



4 - 13. 8

[illegible]

[illegible]

[illegible]

(ڈیوائیڈ) اسٹیٹ ٹیکس اور وراثتی ٹیکس
کے بارے میں ہندوستان کا رویہ (13
مارچ) ایک ایسا موضوع ہے جس پر
ہمیشہ سے دو رائے رہی ہیں۔ ایک
طبقہ اسے سماجی انصاف کا تقاضا
قرار دیتا ہے اور دوسرا اسے
سرمایہ کاری کی راہ میں رکاوٹ
سمجھتا ہے۔ اس اداریے میں ہم
دونوں پہلوؤں کا جائزہ لیتے ہیں۔

اسٹیٹ ڈیوٹی کا بنیادی اصول یہ
ہے کہ مرنے والے کی چھوڑی ہوئی
جائداد پر ریاست کو حصہ ملے
تاکہ دولت چند ہاتھوں میں
مرتکز نہ ہو۔ ماضی میں بھارت
میں یہ شرح 10، 20، 100 اور
1000 فیصد تک رہی اور
اندرا گاندھی کے دور میں
اسے ختم کر دیا گیا۔ آج
بحث یہ ہے کہ کیا ایسا
فیصلہ درست تھا یا نہیں۔

ٹیکس ماہرین کا ایک گروہ
دلیل دیتا ہے کہ وراثت
پر ٹیکس دراصل دوہرا
ٹیکس ہے کیونکہ آمدنی
پہلے ہی ٹیکس دی جا
چکی ہوتی ہے۔ دوسری
طرف سماجی کارکن
کہتے ہیں کہ بغیر
محنت کی دولت
نسلوں تک منتقل
ہونا عدم مساوات
کو بڑھاتا ہے۔

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2 [illegible]
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[illegible] 2 [illegible] 2 [illegible]
[illegible] 4 [illegible] 2
[illegible] 3, 4, 10, 100, 1000 [illegible] 10000, [illegible]
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ワ[illegible]ル・ハンズ・ハーモニー・ネ
ルスクリーズ・ラヌ・ムーヴメントス
ハウ・ヒ・ウ・ヒ・ウ・ヒ・ウ・ヒ・ウ・ヒ

ᱱᱚᱞᱚᱢᱚᱞᱚᱜᱚᱨᱚᱱᱤ

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(3) ఈ పటంలో AB వ్యాసార్థం I కేంద్రంగా గీసిన వృత్తం. CD, EF జీవులు I వద్ద ఖండించుకొంటున్నాయి. CF.DE = CE.DF అని నిరూపించండి.

సాధన: I నుండి CE కి లంబం గీయండి. అది CE ని సమద్విఖండన చేస్తుంది. అదే విధంగా I నుండి DF కి లంబం గీయండి. అది DF ని సమద్విఖండన చేస్తుంది.

1 2 3 4 5 6 7

పటంలో 2 వ పటంలో లాగే CE, DF లను 1, 2, 3, 4, 5, 6, 7 అనుకుందాం. 1 వ పటంలో లాగే CF.DE = CE.DF అని నిరూపించండి.

(2) పటంలో AB వ్యాసం. CD, EF జీవులు I వద్ద ఖండించుకొంటున్నాయి. CF.DE = CE.DF అని నిరూపించండి.

సాధన: I నుండి CE కి లంబం గీయండి. అది CE ని సమద్విఖండన చేస్తుంది. అదే విధంగా I నుండి DF కి లంబం గీయండి. అది DF ని సమద్విఖండన చేస్తుంది.

పటంలో 2 వ పటంలో లాగే CE, DF లను 1, 2, 3, 4, 5, 6, 7 అనుకుందాం. 1 వ పటంలో లాగే CF.DE = CE.DF అని నిరూపించండి.

[illegible] (**DF**) [illegible] (**CD**) [illegible] **EF** [illegible]

EIF.EID [illegible]

[illegible] 8000 [illegible]

[illegible] $J:8000^3$ [illegible] $J:8000$

$$\times 8000 \times 8000 = 512000{,}000{,}000$$

[illegible] $\frac{1}{512{,}000{,}000{,}000}$ [illegible]

AN

APPENDIX.

HAVING thus, as we presume, investigated the shortest, most natural and convenient characters for ARTICULATE sounds as expressed in words, we now subjoin what we apprehend would be the most natural, convenient and expeditious character for INARTICULATE sounds, as expressed in music.

For this purpose we have, first, provided distinct marks for the seven letters of the alphabet by which the notes in the gamut, or common scale, are expressed. Secondly, a short and easy method of distinguishing these notes when they stand in different octaves. Thirdly, a ready and concise way of signify-

ing the different ſpecies of notes, or the time required for the ſounding of each. And laſtly, that theſe three ſhould be ſo united in the ſame character, as to be written with the greateſt facility, and yet appear extremely legible. But of theſe in their order.

Firſt, the ſeven letters by which the notes are named in the gamut, are ſignified by their correſpondent characters in the ſhort-hand alphabet, with this difference only, that for the A we uſe the P, which ſtands for the article A; and the E we ſtrike downwards inſtead of upwards.

Secondly, as to the manner of diſtinguiſhing theſe ſeven notes, when they ſtand in different octaves. The treble and baſs being the only cliffs now uſed, the number of notes required in each may well be included in three diſtinct octaves. The middle octave, is ſignified by the ſhort-hand letters themſelves, without annexing any other mark for that purpoſe. The higher octave, is made by drawing a ſhort line againſt the middle behind

hind each note: the lower octave, by a ſhort line drawn from the middle forwards. To apply the notes in theſe three octaves to the treble and baſs cliffs, it is to be carefully obſerved, that the cliff note in the treble is expreſſed by the character for G in the lower octave; and in the baſs by the character for F in the ſame octave: whenever the notes in the baſs deſcend below A in the lower octave, they may be expreſſed by drawing two ſhort lines from the middle forward, inſtead of one.

Thirdly, the method of diſtinguiſhing the length or time of ſounding each note, is by joining a character to the end: except in the crotchet, which on account of the frequency of its occurrence in all muſic, has no mark annexed.

The SEMIBREVE is expreſſed by annexing the ſhort-hand M; the MINIM by N; the QUAVER by A or E; the SEMIQUAVER by S; and the DEMISEMIQUAVER by U. Here it may be proper to remark, that, in the application of theſe characters, our chief care has

been to apply the ſhorteſt and moſt convenient marks to thoſe notes which are moſt uſed. As for inſtance, the minim and quaver are more frequently uſed than the ſemibreve and ſemiquaver; therefore the marks for the two former, are ſuch as can be joined to the note with more eaſe than thoſe for the latter.

Laſtly, upon this plan each note, whether high or low, whether longer or ſhorter, in any degree, is marked by one or two ſimple lines, and at the moſt by three. The ſeven notes are expreſſed by ſeven characters of the ſhort-hand alphabet, anſwerable to the ſeven letters in the common ſcale. An octave above or below, is denoted by a ſhort line drawn to or from the middle of thoſe characters; while the length of time required for the ſounding of each, is intimated by what is joined to the end of its character. By this means there is no note but what can be written with great expedition; the longeſt requiring

quiring no more time in the writing than that of the crotchet in the common method.

In this ſcheme there will be no occaſion for CLIFFS: yet to diſtinguiſh the parts it will be neceſſary to put at the beginning of the tune TR for treble, C for contra, T for tenor, and B for baſs.

The STATED FLATS or SHARPS are expreſsed in this manner: the letters which are flatted or ſharped are written at the beginning of the tune in common long-hand; and if they are flat the ſhort-hand T is put over them, if ſharp the ſhort-hand S.

An OCCASIONAL FLAT, natural or ſharp, is intimated by the ſhort-hand T, N or S put over the note.

A BAR is denoted by a perpendicular line beginning higher than the notes: a DOUBLE-BAR by two ſuch lines cloſe to each other.

A REST is ſignified by a ſmall cypher.

A DIMINUTIVE NOTE may be expreſſed by making it ſomewhat ſmaller, and placing it a little higher than the line of writing.

Other

Other occaſional marks, ſuch as a TRILL, SLUR, POINT of ADDITION, HOLD, SWELL, TURN, &c. whenever they are required, may be made in the uſual way.

By this method, the true ſounds of the notes may be conveyed to the mind, with, at leaſt, as much eaſe and facility, as if they were deſcribed on different lines and ſpaces. For no juſt reaſon can be aſſigned, why inarticulate ſounds ſhould not be expreſſed by letters ſubſtituted for that purpoſe, as well as articulate ones.

By the uſual method of deſcribing the notes upon lines and ſpaces, there is evidently this diſadvantage: the notes which ſtand in the ſame lines or ſpaces, are not the ſame in different cliffs. This in all muſic, both vocal and inſtrumental, has proved a very great ſource of confuſion. Whereas the flat, natural and ſharp ſound appropriated to each letter being once underſtood, the number of the letters being few, their diſtances from each other will ſoon become familiar. To

any

any perſon, thus inſtructed, every part may be performed with the ſame eaſe. Any piece of muſic thus written, may be ſung with the utmoſt readineſs: and if we conſider, that all muſical inſtruments are eſpecially adapted to the letters, and not to the lines and ſpaces, it might alſo by this method be played at ſight, with as much facility as we can read a paragraph of a news paper, or a page in any printed book.

Thus the notes, and all their variations, together with ſuch other marks as are commonly uſed in muſic, are expreſſed in a very conciſe, eaſy and legible manner. The advantages ariſing from this method would be very conſiderable. A perſon, inſtead of being obliged to have five lines previouſly ruled, may take down a tune upon a blank piece of paper in one line, and the words adapted to the tune may, moſt commodiouſly, be written underneath in ſhort-hand. This ſcheme will ſoon be underſtood and remembered by any who have learned the ſhort-hand, and are

acquainted

acquainted with the gamut or common ſcale; and when it is once familiarized, any piece of muſic may be written with great eaſe and exactneſs. And indeed a common pſalm tune may be taken down in the ſame time as it is ſung; even as any ſpeech, &c. may be taken verbatim by the ſhort-hand, in the ſame time as it is ſpoken.

We here then preſent the public with a plan entirely new, annexing a tune for a ſpecimen; the whole comprehended in one copper-plate.

A Short-hand Character for the expressing of Musical Sounds.

The Notes answerable to the Gamut or common Scale.

A. B. C. D. E. F. G.

higher Octave.

middle Octave.

lower Octave.

A Sharp, Flat and Natural by the Short-hand S, T and N put over e.g. A Sharp. A Flat. A Natural.

A Rest by a Cypher in the line of Writing e.g. o

Bars as usual, only made a little higher than the Notes

The Notes according to their Length or Time of Sounding.

Semibreve

Minim

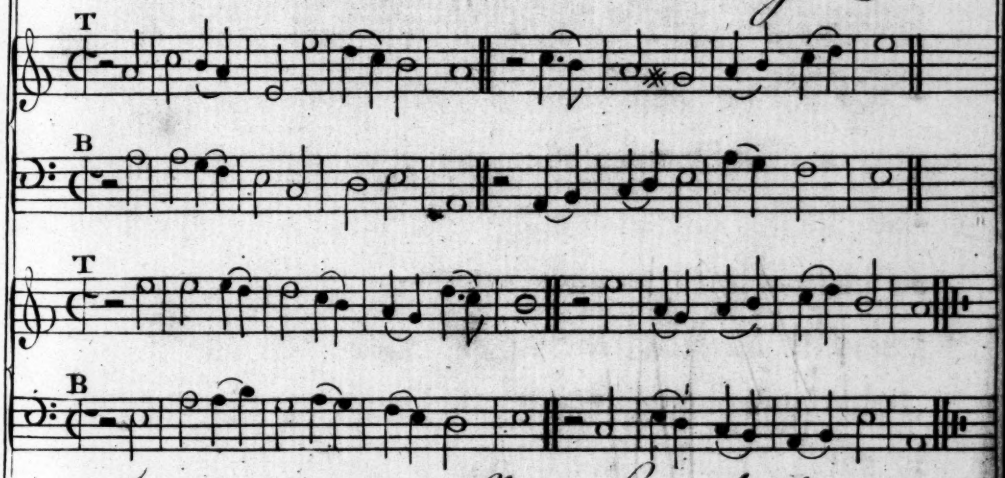
Crotchet has no mark

Quaver (struck upward)

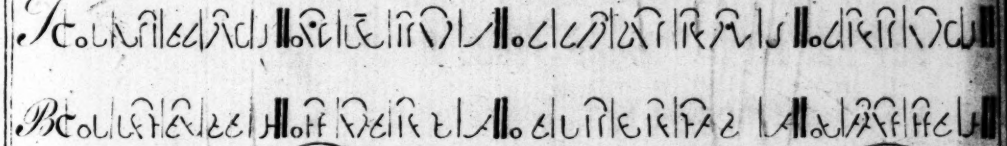
Semiquaver

Demisemiquaver

Walsal tune Tenor and Bass,



The same in the Short hand Character.



FINIS